

IN THE CLAIMS

Please cancel claims 1-55, 57 and 59-82.

56. (Currently Amended) A broad-band liquid crystal linear polarizer comprising:
- a single film structure having top and bottom surfaces and cholesterically ordered molecules between said top and bottom surfaces having a non-linear pitch characteristics;
  - a first phase retardation structure formed on said top surface by orienting the cholesterically ordered molecules at a first depth along a first molecular orientation direction; and
  - a second phase retardation structure formed on said bottom surface by orienting the cholesterically ordered molecules at a second depth along a second molecular orientation direction
- wherein the amount of phase shift imparted by said phase retardation structure as central wavelength  $\lambda_c$  is  $\pi/2$  radians, the amount of phase shift imparted by said second phase shift imparted by said second phase retardation structure at central wavelength  $\lambda_c$  is  $\pi/2$  radians, said cholesterically ordered molecules throughout the bulk of said single film structure have a LHC ordering, and incident light is produced from an unpolarized light source located on either side of said broad-band liquid crystal polarizer.

58. (Currently Amended) A broad-band liquid crystal linear polarizer comprising:
- a single film structure having top and bottom surfaces and cholesterically ordered molecules between said top and bottom surfaces having a non-linear pitch characteristics;

a first phase retardation structure formed on said top surface by orienting the cholesterically ordered molecules at a first depth along a first molecular orientation direction; and

a second phase retardation structure formed on said bottom surface by orienting the cholesterically ordered molecules at a second depth along a second molecular orientation direction

wherein the amount of phase shift imparted by said shift phase retardation structure at central wavelength  $\lambda_c$  is  $\pi/2$  radians, the amount of phase shift imparted by said second phase retardation structure at central wavelength  $\lambda_c$  is  $\pi/2$  radians, said cholesterically ordered molecules throughout the bulk of said single film structure have a LHC ordering, and incident light is produced from a LHCP light source located on either side of said broad-band liquid crystal polarizer.